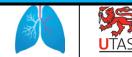
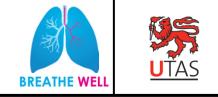
Assessing the effectiveness of social media, compared to traditional advertising methods, in recruiting eligible participants to research studies



### Stuart Ferguson University of Tasmania

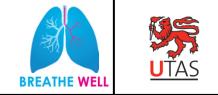


NHMRC CENTRE OF RESEARCH EXCELLENCE FOR CHRONIC RESPIRATORY DISEASE AND LUNG AGEING IN COLLABORATION WITH THE ROYAL HOBART HOSPITAL, QUEENSLAND INSTITUTE OF MEDICAL RESEARCH AND THE UNIVERSITY OF MELBOURNE



- I have received researcher-initiated project grant funding from Pfizer (through the GRAND initiative), have worked as a consultant for GSK & Chrono Therapeutics, & have served on an advisory board for Johnson & Johnson.
- Throw and Frandsen have nothing to declare.

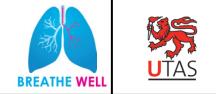




- This work was supported by grant funding from Pfizer (GRAND) awarded to Dr Ferguson.
- Dr Frandsen is supported through a fellowship from Cancer Council Tasmania.



- Recruitment of participants crucial for the success of studies
- Difficultly often under-estimated
  - Find the right people at the right time
  - Increasing difficult as smoking rates decrease
- Traditional strategies: "old media"
  - Newspapers, radio, television, (flyers)
  - Decreasing "reach" over time
  - Broad—non-specific—audience



- Increasing popularity & use
- Facebook
  - Worldwide: >1.7 billion active users
  - >1.5 billion active mobile users
  - >4.7 billion pieces of content shared daily
- Twitter: >315 million active users
- Instagram: >400 million active users
- Attractive target for advertisers, including researchers
  - Online surveys & clinical studies

# Advantages of using social media for recruitment

- Reach
- Targeting (e.g., geographic, demographic)
- Real-time control
  - Expenditure
  - Participant flow
- Better conversion rates?
  - Procedure facilitates self-screening?
  - Informed contacts?
- Cost effective?





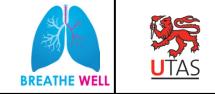
You may be eligible to take part in this research project. Compensation provided.

Quit smoking for research utas.edu.au



UTAS is looking for smokers ready to quit. You may be eligible. Compensation provided.





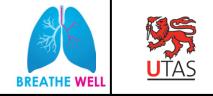
- Concerns about the "reach" of social media
  - Young, well-educated / "tech savvy", female
- Demographic profile becoming more diverse
  - >60%?! of Australian have a Facebook account
  - Average Australian user now >40 yrs old
  - Traditional vs Facebook: Samples well-matched (Frandsen et al 2014)
    - Younger, but similar smoking characteristics
    - Needs to be replicated

#### **Objectives**



- Examine conversion rates
  - Screened, eligible, enrolled, and completed
  - Cost per participant
- Compare demographic characteristics

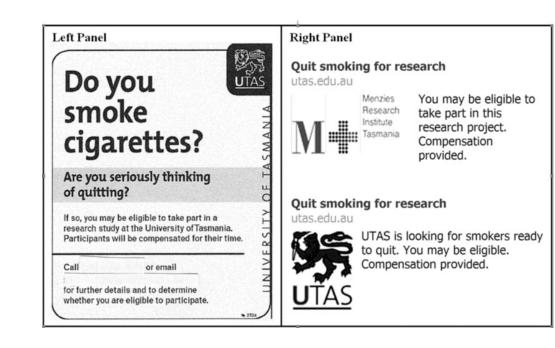
#### **Methods**



- Data from a recently completed RCT
  - Sample: Interested quitters
- Range of recruitment methods
  - Assessed at screening
- Compared endpoints by

recruitment source

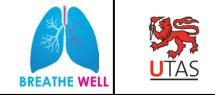
Traditional vs Facebook





| Recruitment strategy |                       | n (%)      |
|----------------------|-----------------------|------------|
| Social media         | Facebook              | 228 (55.1) |
| Traditional media    |                       | 148 (37.5) |
|                      | Newspaper             | 92 (22.2)  |
|                      | Word of mouth         | 33 (8.0)   |
|                      | Flyer                 | 22 (5.3)   |
|                      | Internet <sup>a</sup> | 4 (1.0)    |
|                      | Radio                 | 1 (0.2)    |
|                      | Unknown <sup>a</sup>  | 34 (8.2)   |

~55% of individuals screened heard about the study via Facebook



|            | Social media<br>AUD \$5183.13 |        | Traditional media | Traditional media |  |
|------------|-------------------------------|--------|-------------------|-------------------|--|
| Total cost |                               |        | AUD \$4343.10     |                   |  |
|            | n (%)                         | \$     | n (%)             | \$                |  |
| Screened   | 228 (100)                     | 22.73  | 148 (100)         | 29.35             |  |
| Eligible   | 138 (60.5)                    | 37.56  | 97 (65.5)         | 44.77             |  |
| Enrolled   | 92 (40.4)                     | 56.34  | 83 (56.1)         | 52.33             |  |
| Completed  | 50 (21.9)                     | 103.66 | 54 (36.5)         | 80.43             |  |

- Social media:
  - Lower conversion rates at all time-points
  - More cost effective for finding eligible participants
  - BUT: Less cost effective for later endpoints



|                                 | Visited website prior to contacting researchers |           |
|---------------------------------|---|-----------|
|                                 | Yes   | No        |
|                                 | n (%)   | n (%)     |
| Overall (screened) <sup>a</sup> | 284 (80.5)                                      | 69 (19.5) |
| Eligible <sup>b</sup>           | 176 (62.0)                                      | 48 (69.6) |
| Enrolled <sup>b</sup>           | 128 (45.1)                                      | 37 (53.6) |
| Completed <sup>b</sup>          | 75 (26.4)                                       | 23 (33.3) |

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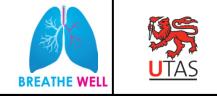
## Participants recruited via Facebook similar to

#### those recruited using traditional methods



|                                |   | Overall     | Social media | Traditional media |  |
|--------------------------------|---|-------------|--------------|-------------------|--|
|                                |   | n=182       | n=92         | n=83              |  |
|                                | Demographics                            |             |              |                   |  |
|                                | Age, years, mean (SD <sup>a</sup> )     |             | 39.3 (10.9)  | 44.9 (12.6)       |  |
|                                | Gender (female) <sup>b</sup> , n (%)    |             | 43 (46.7)    | 28 (34.1)         |  |
| Education <sup>c</sup> , n (%) |   |             |              |                   |  |
|                                | High school or less, n (%)              | 74 (45.4)   | 39 (45.9)    | 35 (44.9)         |  |
|                                | Certificate or trade, n (%)             | 60 (36.)    | 34 (40.0)    | 26 (33.3)         |  |
|                                | College, n (%)                          | 29 (17.8)   | 12 (14.1)    | 17 (21.8)         |  |
|                                | Income <sup>d</sup> , n                 |             |              |                   |  |
|                                | <\$21,000                               | 18 (10.9)   | 6(7.1)       | 12(15.0)          |  |
|                                | \$21,000-\$51,999                       | 38 (23.0)   | 19 (22.4)    | 19 (23.8)         |  |
|                                | \$52,000-\$77,999                       | 38 (23.0)   | 24 (28.2)    | 14 (17.5)         |  |
|                                | \$78,000-\$103,999                      | 31 (18.8)   | 16 (18.8)    | 15 (18.8)         |  |
|                                | >\$104,000                              | 40 (24.2)   | 20 (23.5%)   | 20 (25.0)         |  |
| Smoking characteristics        |   |             |              |                   |  |
|                                | CPD, mean (SD)                          |             | 19.1 (8.0)   | 17.4 (5.8)        |  |
|                                | Motivation to quit, mean (SD)           | 89.5 (10.8) | 89.2 (8.0)   | 91.1 (8.8)        |  |
|                                | Confidence to quit, mean (SD)           | 72.6 (19.3) | 69.2 (19.7)  | 77.3 (16.4)       |  |
|                                | HSI, mean (SD)                          | 3.0 (1.2)   | 3.2 (1.3)    | 2.9 (1.2)         |  |
| IN COLLABORATI                 | Number of past quit attempts, mean (SD) | 3.8 (3.9)   | 4.1 (4.4)    | 3.3 (2.8) OF      |  |

OF MELBOURNE



- Participants recruited via Facebook similar to those recruited using traditional methods
  - Younger
  - Less confident about quitting spontaneous?
- Lower conversion rates with social media
  - Generate interest, but not commitment
- People do not appear to self-screen
  - Possible to drive / incentivise?

Also see: Frandsen M, Thow M, Ferguson SG (2016). JMIR Res Protoc;5(3):e161



- Collaborators
  - Dr Mai Frandsen & Megan Throw
  - Georgie Gallagher
  - BSRG staff & students
- Funding bodies
  - Pfizer (GRAND)
  - RHHRF
  - Cancer Council Tasmania